

## REMARKS

### The Amendments

The claims are amended to replace the term "interference pigments" with "pearl luster pigments." Support for the pearl luster pigment term is established in the original disclosure; see, e.g., page 4, lines 25-36; page 5, lines 32-34; and the Examples using IRIODIN pigments (see page 12), which are pearl luster pigments. One of ordinary skill in the art knows that the terms "interference" and "pearl luster" are, when applied to pigments, essentially synonymous. See, e.g., the attached excerpts from the "Pearl Lustre Pigments" and "Ullman's Encyclopedia of Industrial Chemistry" books. These make clear what is well known in the art, i.e., that:

- "interference pigment" is a term used in the art having an art-recognized meaning of exhibiting the "interference" effect on light as described at page 34 of the "Pearl Lustre Pigments" book;
- the term "pearl luster pigment" is also a term of art having an art-recognized meaning as relating to pigments having a pearlescent or "nacreous" effect due to the above-referred to interference effect upon light; and
- one of ordinary skill in the art knows that "interference" or "pearl luster" pigments are distinct from absorption pigments or total reflection ("metal effect") pigments in that they have both a reflection and transmission component, see, e.g., page 20, of the "Pearl Lustre Pigments" book.

Thus, applicants refute the allegation in the Office Action that they are incorrect in asserting that "interference" pigment does not have any art-recognized meaning, which is applicable here. Although this point is now rendered moot by the replacement with the "pearl luster"

in the pigment art which is dependent on the "interference" effect.

Certain claims were also amended to recite that the compositions of the invention are "suitable for agricultural applications." The support for this is evident in the specification as a whole, particularly see page 5, line 35, to page 6, line 12, for example.

It is submitted that the above amendments would put the application in condition for allowance or materially reduce or simplify the issues for appeal. The amendments do not raise new issues or present new matter. The amendments merely clarify what should have been clear from the previous claims but have been made to address the failure to come to an understanding on the meaning of certain art-recognized terms. They were not earlier presented because it was believed that the art-recognized meaning could be established and there would be no need to amend. Accordingly, it is submitted that the requested amendments should be entered.

The amendments do not narrow the scope of the claims and/or were not made for reasons related to patentability, as discussed above. The amendments should not be interpreted as an acquiescence to any objection or rejection made in this application.

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

### **The Rejection under 35 U.S.C. §102 over Marco**

The rejection of claims 18-21, 24-28 and 31 under 35 U.S.C. §102(b), as being anticipated by Marco (Phytopathology article) is respectfully traversed.

As discussed above, the "interference pigment" term did distinguish the reference because one of ordinary skill in the art knows that the term has an art-recognized meaning which is distinct from the aluminum foil or plastic materials of Marco. The "pearl luster pigment" (essentially synonymous with "interference pigment") term likewise distinguishes the Marco materials. In the pigment art, the only reasonable interpretation of the terms "interference pigment" and "pearl luster pigment" are pigments which exhibit an interference effect as described in the attached "Ullman's" and "Pearl Lustre Pigments" book excerpts, i.e., they have significant components of both reflecting and transmitting light which, for example, creates a color flop effect. See particularly Fig. 17 on page 20 of the "Pearl Lustre Pigments" book showing the distinction between absorption, metal effect (i.e., reflection) and pearl luster pigments. In the pigment art, the term interference does not simply mean having any blocking effect on light transmission. The modification to the pearl luster pigment term makes this even more clear.

Marco discloses that its whitewash materials are, like the mentioned aluminum foil, purely reflective (and possibly absorbing) materials and there is no suggestion, whatsoever, of the use of pearl luster pigments or any other pigment exhibiting an interference effect. Thus, Marco fails to either anticipate or render obvious any of the instant claims. The 35 U.S.C. §102 rejection should be withdrawn.

**The Rejection under 35 U.S.C. §102 over JP '508**

The rejection of claims 18-21 and 24-28 under 35 U.S.C. §102(b), as being anticipated by JP 60-149508 is respectfully traversed.

JP '508 discloses treating of plants with a fine white powder material, e.g., calcium carbonate; see also bottom of page 4 of translation. Like Marco, none of the materials mentioned are pearl luster pigments or otherwise provide the above-described art-recognized interference effect. Further, there is no suggestion of any desirability of using a pearl luster pigment. Thus, the rejection under 35 U.S.C. §102 should be withdrawn and no 35 U.S.C. §103 rejection is supported either.

**The Rejection under 35 U.S.C. §102 over Letteron**

The rejection of claims 25-27 under 35 U.S.C. §102(b), as being anticipated by Letteron (U.S. Patent No. 3,099,897) is respectfully traversed.

Letteron discloses the use of mica materials for mulching purposes. Mica, without a metal oxide coating layer which is not disclosed or suggested in Letteron, is not an interference or pearl luster pigment. See, e.g., pages 30-31, of the "Pearl Lustre Pigments" book excerpt describing that mica requires a TiO<sub>2</sub> coating to provide a pearl luster effect. Nor is there any suggestion to modify the Letteron materials to make them interference pigments. For this reason, at least, Letteron cannot anticipate nor render obvious the claimed invention, i.e., the compositions containing pearl luster pigments. As recognized in the Office Action, Letteron is further distinguished from the method claims because it does not suggest a method involving applying its materials to the surface of the plant. Accordingly, the rejection under 35 U.S.C. §102 should be withdrawn.

### **The Rejection under 35 U.S.C. §102/103 over Ambrosius or Duschek**

The rejections of claims 25-27 and 29-30 under 35 U.S.C. §102(b), as being anticipated by, or under 35 U.S.C. §103, as being obvious, over Ambrosius (U.S. Patent No. 4,867,794) or Duschek (U.S. Patent No. 5,472,491) is respectfully traversed. Because they are addressed in the same manner in the Office Action, the rejections based on both of these references will be discussed together here.

Ambrosius and Duschek, admittedly, disclose pearl luster pigments. But neither reference discloses or remotely suggests a method for applying a composition containing such pigment to the surface of a growing plant. Accordingly, as recognized in the Office Action, these references are not applicable against applicants' instant method claims.

The Office Action states that, as to composition claims, a disclosure of the "same exact composition" supports an anticipation/obviousness rejection even in the lack of any recognition of the use contemplated by the invention in question. Contrary to misunderstanding this point, as alleged in the Office Action, applicants do understand and agree in principal. However, neither Ambrosius or Duschek disclose an embodiment of the "same exact composition" as claimed. Claim 25 recites, in part, a "composition .. which comprises at least one pearl luster pigment, together with at least one agriculturally acceptable diluent, carrier or adjuvant, in the form of a spray, dusting powder or aqueous suspension or dispersion, the composition being effective for applying to at least one surface of a growing plant and being suitable for agricultural applications." There are no teachings in Ambrosius or Duschek which either explicitly show or suggest that the reference inventors had any possession or contemplation of combining their pearl luster pigments in a

composition with an "agriculturally acceptable diluent, carrier or adjuvant" such that the composition is "effective for applying to at least one surface of a growing plant and .. suitable for agricultural applications." Further, it certainly does not teach or motivate the preparation of a composition with is "effective for applying to at least one surface of a growing plant." Also, there is no disclosure of providing the pearl luster pigments in the form of a spray or dusting powder. Although the references do disclose the use of aqueous suspensions or dispersions for use in preparing their pigments, these are neither an "agriculturally acceptable diluent, carrier or adjuvant" nor "suitable for agricultural applications." For example, the suspension described in Ambrosius at col. 3, lines 3-16, would contain a large amount of sodium chloride which would not only harm the plants but mask the advantageous pearl luster pigment effect. It would not have been obvious to one of ordinary skill in the art to modify the Ambrosius or Duschek compositions to provide with the pigments an "agriculturally acceptable diluent, carrier or adjuvant" making the composition "suitable for agricultural applications." Thus, the composition claims are also not rendered obvious by these references.

For the above reasons, it is urged that the 35 U.S.C. §102 and/or §103 rejections over Ambrosius and Duschek should be withdrawn.

#### **The Rejection under 35 U.S.C. §102/103 over GB '247**

The rejections of claims 18 and 25 under 35 U.S.C. §102(b), as being anticipated by, or under 35 U.S.C. §103, as being obvious, over GB 2098247 is respectfully traversed.

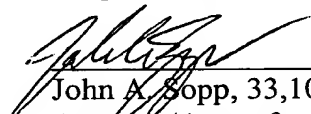
UK 2,098,247 is even more distinct from applicants' methods and compositions than the above-discussed references for several reasons. This reference is directed to the use of reflective netting material for placing over plants. UK '247 neither discloses nor suggests the

use of a pearl luster pigment or a composition containing such, for any use, let alone treating plants. As discussed above, a totally reflective material is distinct from a pearl luster or interference pigment. This alone distinguishes the reference from all of the applicants' claims. Further, it is submitted that placing a netting over plants is distinct from "applying [a composition] to at least one surface of the growing plant." For both of these reasons, it is urged that UK '247 in no way suggest applicants' methods or compositions to one of ordinary skill in the art. Thus, the rejection under 35 U.S.C. §102/103 should be withdrawn.

It is submitted that the application is in condition for allowance. But the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,

  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

18. (Amended) A method for protecting a growing plant from insects and from insect-transmitted plant viruses, which comprises applying to at least one surface of the growing plant, a composition comprising at least one ~~interference~~ pearl luster pigment and at least one agriculturally acceptable diluent, carrier or adjuvant, whereby said composition is suitable for agricultural applications, and whereby said composition is effective to repel said insects and thus protect the plant.

20. (Amended) The method according to claim 19, wherein said composition is an aqueous suspension or dispersion of said ~~interference~~ pearl luster pigment.

22. (Amended) A method for protecting a growing plant from insects and from insect-transmitted plant viruses, which comprises applying to at least one surface of the growing plant, a composition comprising at least one ~~interference~~ pearl luster pigment whereby said composition is effective to repel said insects and thus protect the plant, wherein said ~~interference~~ pearl luster pigment is selected from the group consisting of:

- a mica coated with  $\text{TiO}_2$ ;
- a mica coated with  $\text{Fe}_2\text{O}_3$ ;
- a mica coated with both  $\text{TiO}_2$  and  $\text{Fe}_2\text{O}_3$ ;
- a mica coated with both  $\text{TiO}_2$  and graphite;
- a mica coated with  $\text{TiO}_2$  and  $\text{SnO}_2$ ; and
- $\text{BiOCl}$  crystals.



23. (Twice Amended) The method according to claim 22, wherein the ~~interference~~ pearl luster pigment is mica coated with  $\text{TiO}_2$  further containing in the coating at least one of graphite and  $\text{SnO}_2$ .

25. A composition for protecting growing plants from insects and from insect-transmitted plant viruses, which comprises at least one ~~interference~~ pearl luster pigment, together with at least one agriculturally acceptable diluent, carrier or adjuvant, in the form of a spray, dusting powder or aqueous suspension or dispersion, the composition being effective for applying to at least one surface of a growing plant and being suitable for agricultural applications.

27. (Amended) A composition according to claim 26, which is an aqueous suspension or dispersion of said ~~interference~~ pearl luster pigment.

29. (Twice Amended) A composition according to claim 25, wherein ~~interference~~ said pearl luster pigment is selected from the group consisting of:

a mica coated with  $\text{TiO}_2$ ;

a mica coated with  $\text{Fe}_2\text{O}_3$ ;

a mica coated with both  $\text{TiO}_2$  and  $\text{Fe}_2\text{O}_3$ ;

a mica coated with both  $\text{TiO}_2$  and graphite; and

$\text{BiOCl}$  crystals.

30. (Amended) A composition according to claim 25, wherein said ~~interference~~ pearl luster pigment is mica coated with  $\text{TiO}_2$  further containing in the coating at least one of graphite and  $\text{SnO}_2$ .

31. (Amended) The method of claim 18, wherein the composition comprising at least one ~~interference~~ pearl luster pigment is also applied to a background locus of the plant.